

MMD-1 RD&D PERMIT
MODULE II - GENERAL FACILITY CONDITIONS

II.A. APPLICABILITY

- II.A.1 The MMD-1 is a mobile unit capable of treating non-explosively configured chemical warfare agent filled waste munitions. The MMD-1 is being tested at Dugway inside a test chamber before use at other sites where non-stockpile munitions have been stored or disposed.
- II.A.2 The Permittee may chemically treat waste chemical munitions and waste chemical agent filled test items in the MMD-1. The Permittee may store the waste in the Munitions Storage Magazine while awaiting treatment.

II.B. DESIGN AND OPERATION OF FACILITY

- II.B.1. The Permittee shall maintain and operate the facility and surrounding areas to minimize the possibility of a fire, explosion, or any sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, groundwater, or surface water which could threaten human health or the environment.
- II.B.2. Additions and construction changes to the waste management units regulated by this permit shall be documented by as-built drawings and professional engineering certifications.
- II.B.3 After review of the drawings and field verification of the facilities, the Executive Secretary will notify the Permittee in writing of any change which he concludes does not satisfy the operating requirements of this permit. If it is established that such changes are permit violations, the Executive Secretary may require the Permittee to remove and replace any construction inconsistent with any approved designs and specifications.
- II.B.4 The Permittee shall perform equipment setup, preoperational testing and test activities according to the Test Plan in Attachment 2 and according to item 28 of the administrative record for this permit. Prior to operation, the Executive Secretary shall inspect the facility and verify that testing and monitoring equipment is operational and that the Permittee is capable of compliance with this permit. The Executive Secretary may review operational readiness surveys, acceptance test results and other information as part of this inspection. If the Executive Secretary finds that the facility is ready to operate, the Executive Secretary will provide written authorization to begin operations.

II.C SECURITY

The Permittee shall comply with security conditions and procedures contained in Attachment 3.

II.D. WASTE ANALYSIS PLAN

- II.D.1. The Permittee shall follow the procedures of the Waste Analysis Plan (WAP) included as Attachment 4.
- II.D.1.a The Permittee may use generator knowledge to show that only the chemical warfare munitions items (munitions or DOT cylinders) and amounts and types of agent listed in Attachment 3 are stored and treated as part of the MMD-1 test. The Permittee shall maintain documentation of generator knowledge for each munition treated such as x-rays, portable isotopic neutron spectroscopy (PINS) data, historical data, and the Munition Assessment Review Board (MARB) reports.
- II.D.1.b The Permittee shall document efforts to meet the data quality objectives (DQO) defined in the quality assurance plan included in Attachment 3, Appendix C. Chemical agent analytical results that the Permittee believes are usable, but which do not meet all DQOs, shall be qualified with appropriate corrective actions and explained in the Operating Record. The Executive Secretary may periodically review the validity of analytical results and may require the Permittee to collect additional samples or provide additional information.
- II.D.1.c. The Permittee shall add laboratory matrix spike and matrix spike duplicate (MS/MSD) and laboratory control samples and laboratory control sample duplicate (LCS and LCSD) to Table 4C-2 in Appendix C, Attachment 3. This information shall be provided prior to operations for approval by the Executive Secretary.
- II.D.1.d. The Permittee shall provide copies of the detailed procedures to be followed to achieve the DQOs outlined in Attachment 3, Appendix C, Sections 2 and 3.3. This shall include detailed procedures for collection of waste samples. This information shall be submitted prior to operations for approval by the Executive Secretary.
- II.D.1.e The Permittee shall record the results of data validation for analytical results for RCRA parameters in the operating record. Problems identified during validation of RCRA parameter data must be recorded in the Operating record and must be resolved before waste is sent off site.
- II.D.1.f The Permittee shall submit for approval by the Executive Secretary prior to operations a document describing MMD-1 analytical method flexibility.
- II.D.1.g The Permittee shall submit for approval by the Executive Secretary prior to operations a revised Attachment 3, Table 4-10. This table shall be revised to define footnote Aa@, and to include spent carbon and personnel protective equipment (PPE).

- II.D.1.h The Permittee shall submit for approval by the Executive Secretary prior to operations a revised Attachment 3, Appendix C, Section 5.3 and Table 4C-4 as necessary to include program control limits for QC chemical agent analyses.
- II.D.1.i The Permittee shall submit for approval by the Executive Secretary prior to operations a revised Attachment 3, Tables 4-4 and 4-5 to include phosgene.
- II.D.2 If the MMD-1 system generates a waste that does not match the general waste profiles in Attachment 3, the Permittee shall immediately notify the Executive Secretary and cease operations. The Permittee shall not resume operations until approved by the Executive Secretary. The Executive Secretary will not approve resumption of operations until the Permittee demonstrates that the chemical warfare agent content of the waste can be adequately evaluated by existing analytical methods.
- II.D.3 Prior to starting operations, the Permittee shall submit a plan, for approval by the Executive Secretary, describing the actions that will be taken to comply with the air emission control standards required by R315-8-22 [40 CFR 264.1083] as specified by 40 CFR 265.1084 for the following wastes:
- Chemical agent contaminated dunnage (e.g., vermiculite, wood or other debris inside propellant charge cans) requiring treatment;
 - Liquid treatment residues
 - Other wastes such as Personal Protective Equipment (PPE), empty munition casings, laboratory waste and house keeping wastes requiring offsite treatment/disposal.
- II.D.4 The Permittee shall sample each batch of VX waste neutralent for the presence of sodium S(2-diisopropylamineethyl) methyl phosphonothioate (EA 2192).
- II.D.5 Prior to operations, the Permittee shall provide information regarding the toxicity of GB-MEA as described in the Test Chemistry report in Attachment 3, Appendix B.

II.E. GENERAL INSPECTION REQUIREMENTS

The Permittee shall inspect as described in Attachment 5. Problems, and subsequent dates of repair or corrective actions, noted during inspections, such as improperly functioning equipment, shall be noted on inspection forms.

- II.E.1 The Permittee shall remedy any deterioration or malfunction as required by R315-8-2.6(c). If the remedy requires more than seventy-two (72) hours from the time that the problem is detected, the Permittee shall submit to the Executive Secretary, before the expiration of the seventy-two (72) hour period, a proposed time schedule for correcting the problem.

- II.E.2. Records of inspections shall be kept as required by R315-8-2.6(d).
- II.E.3. Any problem which could endanger human health or the environment (e.g., chemical agent release, tank rupture, fire, explosion etc.) shall be immediately documented in the operating record and corrected as soon as possible after the problem is discovered. The Permittee shall make every effort to eliminate the threat to human health or the environment within twenty-four (24) hours.
- II.E.4. Problems found during periodic inspections conducted under this Module shall be corrected within the time frame stipulated in Conditions II.E.1 and 3. If, upon determination by the Executive Secretary or the Permittee, continued operation of the waste management unit involved in the inspection could endanger human health or the environment, the Permittee shall cease operation of the unit until the problem has been corrected. The Permittee shall be allowed to undertake those operations which are part of corrective activities.
- II.E.5 The Permittee shall maintain record of each carbon air filter element installation verification. The Permittee shall maintain the MMD-1 Site Supervisor's verification as part of the operating record.
- II.E.6 The Permittee shall inspect containers and their covers and closure devices using Level 1 and Level 2 air emission controls specified by R315-8-22, as follows:
 - II.E.6.a All containers used for waste storage must be equipped with a cover and closure devices that form a continuous barrier over the container openings with no visible holes, gaps, or other open spaces, or shall comply with relevant DOT regulations on packaging hazardous materials for transportation under 49 CFR Parts 107, 172, 173, 178, 179, and 180.
 - II.E.6.b Container cover or closure devices shall be visually inspected initially within 24 hours after waste is added to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted.
 - II.E.6.c If any container defect is detected, the Permittee shall correct the defect as required by R315-8-22.
- II.E.7 The Permittee shall comply with Level 3 air emission controls in accordance with the requirements of R315-8-22, including inspection and monitoring requirements. Prior to the start of operations, the Permittee shall submit a plan for approval by the Executive Secretary describing inspection and monitoring requirements for Level 3 controls.

- II.E.8 The Permittee shall maintain operating records of the air emission monitoring inspections conducted at the MMD-1 as required by R315-8-5.3.
- II.E.9 Prior to operations the Permittee shall submit for approval by the Executive Secretary, inspection forms and schedules for the items listed in Attachment 11, Appendix E.

II.F. PERSONNEL TRAINING

- II.F.1. The Permittee shall conduct personnel training as required in Attachment 6.
- II.F.2 The Permittee shall insure that appropriate personnel are trained in the air emission control requirements of R315-8-18 and R315-8-22.
- II.F.3 The Permittee shall provide training to meet the requirements of R315-8-2.7(c) for annual refresher training as needed.

II.G GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee shall comply with the requirements of R315-8-2.8. and the requirements of all applicable National Fire Protection Association (NFPA) codes.

II.H. PREPAREDNESS AND PREVENTION

- II.H.1. The Permittee shall comply with Attachment 7 for preparedness and prevention.
- II.H.2. Required Equipment. At a minimum, the Permittee shall equip and maintain in good operating condition at the facility the equipment listed in Attachment 7.
- II.H.3. Testing and Maintenance of Equipment. The Permittee shall test and maintain the equipment as required by the National Fire Protection Association (NFPA) to assure its proper operation in time of emergency.
- II.H.4. The Permittee shall maintain records of preventative maintenance and repair activities and shall keep schedules, reflecting minimum and planned frequency for the performance of preventative maintenance activities in the Operating Record.
- II.H.5. Access to Communications or Alarm System. The Permittee shall maintain access to the communications or alarm system and medical support as required by R315-8-3.5 as outlined in Attachment 7.

II.I. CONTINGENCY PLAN

- II.I.1. Implementation of Plan. The Permittee shall immediately carry out the provisions of the Contingency Plan found in Attachment 8 and follow the emergency procedures described by R315-8-4.7. and R315-9 as needed, whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which threatens or could threaten human health or the environment.
- II.I.2. Copies of Plan. The Permittee shall comply with the requirements of R315-8-4.4.
- II.I.3. Assembly Points and Evacuation Routes. The Permittee shall designate assembly points and evacuation routes for the MMD-1 Test Facility. Assembly points and evacuation routes shall be clearly posted at the facility.
- II.I.4. Emergency Coordinator. A trained emergency coordinator shall be available at all times in case of an emergency, as required by 40 CFR 264.55.

II.J. RECORDKEEPING AND REPORTING

- II.J.1. In addition to the record keeping and reporting requirements specified elsewhere in this permit, the Permittee shall comply with this section.
- II.J.2. The Permittee shall maintain a written Operating Record at the facility in accordance with R315-8-5.3. and R315-50-2.
- II.J.3. The Permittee shall submit additional reports to the Executive Secretary in accordance with R315-8-5.8.
- II.J.4. The Permittee shall provide the Executive Secretary with a copy of the final project report.

II.K. CLOSURE/POST-CLOSURE

- II.K.1. Performance Standard. The Permittee shall close the facility as required by the closure plan in Attachment 9.
- II.K.2. The Permittee shall notify the Executive Secretary of plans to begin final closure. This notice shall be provided orally or in writing at least 10 working days prior to implementation of final closure activities.
- II.K.3. Certification of Closure. The Permittee shall certify that the facility has been decontaminated and closed in accordance with R315-8-7, and this permit and shall provide a certification by an independent, Utah registered professional engineer qualified by experience and education in the appropriate engineering field. The information needed for approval of closure certification is listed in Attachment 9.

- II.K.4 Prior to starting final closure the Permittee shall submit for approval by the Executive Secretary a list of equipment skids and Unpack Area items that will be air monitored during closure.

II.L EQUIVALENT MATERIAL/INFORMATION

If certain materials, equipment, and administrative information (such as names, phone numbers, addresses) are specified in the permit, the Permittee shall be allowed to use an equivalent or superior. The Permittee shall also be allowed to make modifications to the MMD-1 treatment and monitoring systems as needed to meet or exceed RD&D goals and objectives as outlined in Attachments 1 and 2. Use of such equivalent or superior items and modifications to meet RD&D goals and objectives shall not be considered a modification of the permit, but the Permittee shall place in the operating record (prior to the institution of such revision) the revision, accompanied by a narrative explanation, and the date the revision becomes effective. The Executive Secretary may judge the soundness of the revision during inspections of the Facility and take appropriate action. The format of the tables, forms, and figures, are not subject to the requirements of this permit, and may be revised at the Permittee's discretion.

II.M FINANCIAL ASSURANCE FOR CLOSURE AND POST-CLOSURE

As indicated by R315-8-8 and 40 CFR 264.140(c), the Federal Government is exempt from the requirements of 264.145, 264.147 and 264.148

II.N. MONITORING REQUIREMENTS

The Permittee shall perform monitoring in accordance with the Environmental Monitoring Plan in Attachment 10.

- II.N.1. The Permittee shall revise Attachment 10, prior to operations and for approval by the Executive Secretary. In addition to the items listed in Condition II.N.1.a below, the monitoring plan shall address monitoring during normal and off-normal operations, definitions of normal operations and operational periods, frequency and procedures for monitoring sample line challenges, frequency and procedures for DAAMS quality control samples, clarification on how DAAMS are used for historical and confirmation sampling, explanation on when carbon filters are changed out and updates to figures and tables.

- II.N.1a
- i. Add a monitoring quality control project plan (QCPP)
 - ii. Add a quality control collection system for colorimetric tubes to Section 1.2.3
 - iii. Modify Sections 1.4.2, 1.4.10 and 1.4.11 to reference the analytical method for DAAMS tube analysis and delete reference to Section 2.2.2.3.

- iv. Modify Figure 7 to show that minicams and DAAMS samples are co-located.
- v. Modify Section 1.5 to include a list of Quality Control sample requirements.
- vi. Modify Section 1.7.2 to list or reference the limiting conditions for operation of the MMD-1.
- vii. Modify Table 4-1 to specify rack numbers.

III.N.2 Before waste is introduced into the system and before each chemical agent campaign, the Permittee shall document in the operating record that all monitoring devices are functional.

II.O ORGANIC AIR EMISSION STANDARDS

II.O.1 The Permittee shall implement the air emission standards as specified in R315-8-22 (incorporating by reference 40 CFR 264.1080 through 264.1091) for the MMD-1 as applicable.

II.O.1.a Prior to the start of operations, the Permittee shall submit a plan for approval by the Executive Secretary describing how the Permittee intends to comply with applicable aspects of R315-8-22 (incorporating by reference 40 CFR 264.1080 through 264.1091).